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Marine Planning &
Development

2000/01 Port of Portland Marine Terminals Maintenance Dredging Plan

Program # 89246

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2000/01 Marine Terminals Maintenance Dredging Plan

Issues for the 2000/01 Dredging Season:

- The 2000/01 season begins with lower than average riverflow and with a less pronounced freshet than in recent years. The lack of extensive snow pack and warm spring will result in lower late summer flows.
- There is no change in the in-water work windows for the 2000/01 dredging season. The anticipated work windows are:
  - Willamette River: July 1-October 31; December 1-January 31
  - Columbia River: November 1-February 28
- One of the Port's two Morgan Bar Disposal permits (DSL #FP-3891) was not renewed by the State of Oregon and expired June 30, 1999. The only concern barring issuance of the permit is an apparent incompatibility with a 1998 Multnomah County zoning ordinance barring placement of fill in floodways. The Port continues to investigate its options with respect to Multnomah County. Based on consultation with a land use attorney, the most promising approach is that flow-lane disposal may qualify as a non-conforming use which pre-existed the zoning code amendment.
- The Port's Federal Morgan Bar Flow Lane Disposal permit (ACOE # 95-783) will expire November 1, 2000. Renewal will be coordinated with the Corps of Engineers
- There are no private or public in-water confined disposal sites available for contaminated dredged material in the Portland Harbor. Any maintenance dredging project that includes contaminated dredged material must either be delayed, or taken to an upland location.
- The planning, permitting and design of the Port's dredge material rehandle facility will be completed to allow time for construction in 2000 to support the Port's maintenance dredging needs.

- There has not yet been an NPL listing for the Portland harbor, though the decision is pending and will likely be made during the 2000/01 dredging season. How the NPL listing might affect maintenance dredging is not known. Under DEQ's Draft Harbor Sediment Management Plan, maintenance dredging for navigation purposes may be allowed within the study area under strict review, subject to suitability of the dredged material.

  As Terminal 4 is entirely within the Harbor Study area, review of dredging projects at Terminal 4 may become extended. Terminal 2 is immediately upstream and adjacent to DEQ's Harbor Study area. Although the sediments at Terminal 2 have been thoroughly evaluated and have been found suitable for unconfined in-water disposal, the proposed NPL listing may impact the feasibility of dredging and extend the review period for any proposed maintenance project at T-2.

- Finally, the US Army Corps of Engineers has not obtained Section 401 Water Quality Certification (Oregon DEQ) nor initiated the Section 7 ESA Consultation with NMFS for channel maintenance for the Willamette River. Consequently, there will be no dredging this season on the Willamette in the federal channel. The Corps has obtained authorization in its 01 budget (Start October 2001) for Willamette River maintenance work.

Standard Maintenance Dredging Cycle

May-June	Reconnaissance Survey of all Port Marine Facilities
June	Identification & prioritization of Berths requiring dredging
July/August	Development of Sediment Characterization plans Dredging Project Preliminary design & specifications
August/September	Sediment Sampling & Characterization Dredging project final design & contractor selection
October	Willamette River Dredging Window
December-January	Willamette River Dredging Window
December-February	Columbia River Dredging Window Morgan Bar In-water disposal window

Additional Schedule Considerations for 2000/01

1. The proposed dredge material rehandle facility is scheduled to be functional in November 2000. This would allow dredging to proceed in the winter in-water work windows.
2. The ACOE dredged material evaluation framework does not address decision criteria for upland disposal of dredged sediment. Sampling requirements for dredged material which is proposed for upland disposal should be identified early to allow time for evaluation prior to making decisions affecting the permitting and construction of the dredged material rehandling facility(s) as well as the ultimate disposal options for the dredged material.
3. The Regional Dredging Team (EPA, ACOE, and DEQ) has not yet approved the Port's sediment characterizations at Terminal 2, Terminal 4, Terminal 5, and Terminal 6.

Budgeted Maintenance Dredging in 2000/01

Terminal/ Berth	River	Last Dredged	Volume (cy)
Terminal 2/ Berth 203-206	Willamette	1996	10,000+

Table 1. Budgeted 2000/01 Dredging.

Notes:

- Final maintenance requirements will be determined based on evaluation of reconnaissance surveys in June.
- Terminal 2 dredging anticipated based on survey data from 1998 and given pattern of recurring infill on a 2 year (or less) cycle.
- T-2 dredging was scheduled for 1998 dredging season but deferred due to lack of sufficient material to warrant a project. T-2 dredging was again deferred in 1999 due to lack of disposal options and lack of operational urgency.

Proposed Sediment Characterization Activities 1999/2000:

Sediment characterization is based on the 1998 Lower Columbia River Dredged Material Evaluation Framework. The evaluation framework lays out the chemical and biological testing methods and evaluation criteria used to make management decisions regarding disposal options for the dredged material.

Generally, LCRMA recency standards consider dredged material characterizations for sediments in the Willamette River and at Terminal 6 in the North Portland Harbor valid for up to 24 months.

With adopted standards in place, the Port now has the opportunity to develop a program of testing which keeps the evaluations current. This provides the following advantages:

- allows the Port to have the information on approved disposal options ready when a dredging project is identified
- reduces the lag between identifying the dredging need and carrying out a maintenance project
- sets the stage for planning for disposal needs more effectively
- provide data to agencies and other public stakeholders in a timely manner

Current Sediment Characterization Status

In the 1999 dredging season, the Port undertook several dredged material evaluations using the new evaluation framework. The Port conducted Tier II (chemical) testing at Terminal 5, Berth 501 and Berth 503. The Port also reviewed Tier III (bioassay) test results from 1998 work at Terminal 4 (Berth 416) and at Terminal 2 with the Regional Dredging Team.

Hart Crowser reviewed recent sediment quality information at the request of the Port for use in designing a dredge material re-handling facility. This information was presented in Portwide Terminal Assessment, Hart Crowser, and April 5, 2000. Tables from this document can be viewed at: (to be added in final)

Current status of sediment characterizations at Port marine terminal berths is summarized below:

Terminal/ Berth	River	Last Tested	Status
Terminal 1	Willamette	1990	Testing no longer current
Terminal 2/ Berth 203	Willamette	1998	Suitable for unconfined in-water
Terminal 2/ Berth 204-206	Willamette	1998	Suitable for unconfined in-water
Terminal 4/ Berth 401	Willamette	1998	Tier II- ML for DDT Exceeded
Terminal 4/ Slip 1	Willamette	1995	Testing no longer current Site Assessment underway
Terminal 4/ Berth 410/411	Willamette	1997/98	Tier II- some SL and one ML exceeded- used confined disposal in 1998
Terminal 4/ Slip 3	Willamette	1998	RI/FS underway
Terminal 4/ Berth 414/415	Willamette	pre-1990	Testing no longer current
Terminal 4/ Berth 416	Willamette	1999	Tier II- ML for DDT exceeded
Terminal 5/ Berth 501	Willamette	1999	Tier II- SL for DDT exceeded Tier II- SL level for TBT exceeded in 1999, no DDT
Terminal 5/ Berth 503	Willamette	1999	Suitable for unconfined in-water disposal
Terminal 6/ Berth 601	Columbia	199?	Testing no longer current
Terminal 6/ Berth 603-605	Columbia	1998	Tier II SL exceeded for TBT
Terminal 6/ Berth 607	Columbia	early 1990's	Testing no longer current

Table 2. Current Sediment Characterization Status.

Notes:

- All current sediment characterizations meet the evaluation framework adopted by EPA, DEQ, and ACOE in November 1998.
- 1998 Port-wide Tier II testing characterized both 40' and 43' dredging prisms for Terminal 6 (container facility) and Berth 501 (Grain) and Berth 401 (Grain)

The sediment sampling work was coordinated with the appropriate regulatory agencies in advance. Sampling and Analysis plans were prepared by the Port and reviewed by the Regional Dredging Team (DEQ Water Quality, ACOE, and EPA). Test results have been submitted and presented to the Regional Dredging Team. However, no regulatory determinations have been made since 1998 and the Regional Dredging Team has not yet acted to confirm the Port's evaluations.

Proposed Sediment Evaluation Work for 1999

Sediment characterization work for Terminal 2 is sufficient to support potential maintenance dredging at that facility in 2000, if required.

If shoaling at the container facility at Terminal 6, Berth 416, or at Berth 501 indicate a need to dredge in the 2000/01 dredging season, further Type II chemical evaluation may be required in order to segregate and properly manage contaminants that may be present in the sediments.

Willamette facilities may require additional testing to address water quality concerns during dredging or disposal.

Review of the reconnaissance survey results in June may also identify unanticipated dredging requirements and further testing needs.

A summary of the proposed sediment characterization work for 1999 is identified in the table below:

Terminal/ Berth	River	Scope	Rationale
Terminal 6	Columbia	Chemical (Tier II)	Data needed to segregate contaminants
Terminal 4 or 5	Willamette	Chemical, Bioassay, and bioaccumulation	Data may be required to evaluate impacts of dredging

Table 3. Anticipated 2000/01 Sediment Characterization Work

Permit Activity in 2000/2001

The Port's existing permits are all 5-year permits, which require consultation on each individual proposed dredging event with the Regional Dredging team. The permits are on separate timelines. Marine staff has recently renewed the DSL permit for Willamette River maintenance dredging (DSL 2080). This permit was only renewed for one year due to uncertainty over dredge material disposal. It is anticipated that construction of the proposed dredge material re-handling facility will facilitate issuance of future dredging permits as well.

Separate facility development and operating permits will be required for the proposed dredge material re-handling facilities.

The Port continues to work on the renewal of the DSL permit FP 3891, which expired in June 1999. No issues of concern were raised by the state agencies involved in the review process. However, the land use status of flow lane disposal at Morgan Bar has changed since the last permit was issued and Multnomah County was not able to sign the land use compatibility certification required by the permit. Port staff is pursuing non-conforming use designation for flow lane disposal of dredged sediments at Morgan Bar, as the activity has been continuous since the 1980's.

As the federal permits are renewed, the Port will reinitiate consultation with the agencies on ESA issues, as well as seek to place the corresponding state permit on the same permit renewal cycle.

Permit	Facility	Expiration Date	Lead
ACOE 95-783	Morgan Bar Flow Lane	11/30/00	Marine P & D
ACOE 96496	Terminal 6 Maintenance	9/30/01	Marine P & D
ACOE 8760	Willamette River Facility Maint.	0201/01	Marine P & D
DSL FP 3891	Morgan Bar Flow Lane	6/30/99	Marine P & D
DSL 7391	Terminal 6 Maintenance	10/20/00	Marine P & D
DSL 2080	Willamette River Facility Maint.	03/01/01	Marine P & D

Table 4. Permit Status 6/2000

Notes:

- More current information on the permit status can be found at::\\Popfs\marplan-pub\Permits\Permit Inventory.xls

Related Activities in 2000/01

Dredging Prism Design
In 1999/2000, the Port of Portland Engineering Department developed standard dredging designs for all active marine terminals. These dredging prisms will be utilized during the routine reconnaissance survey work to identify dredge quantities in a more efficient and expeditious way. The dredge prism project will also allow the Port to collect information on the shoaling patterns, shoaling rates, scour, and other physical changes in the bathymetry of the berths that affect navigation, facility maintenance, and stability of the docks.

Terminal 4 Remedial Investigation & Feasibility Study
Port of Portland is in the process of investigating the sediments of Slip 3 and Wheeler Bay as part of a voluntary clean-up effort with Oregon DEQ. Sediment characterization work was undertaken in 1998/1999, including bioassays to determine sediment toxicity. The investigation is ongoing and remedial alternatives have not yet been developed. No dredging is anticipated in the 200/01 season. The Port has also recently completed a preliminary assessment of sediments in Slip 1. Additional work may be identified in 2000/01

ACOE 40' Channel Maintenance- Port Local Sponsor Obligations
The Port of Portland is responsible for providing lands, easements, and rights-of-way for Federal channel O&M activity. No channel maintenance activity is anticipated for the Willamette River in 2000/01. The Corps ahs obtained an appropriation to conduct maintenance dredging on the Willamette in the 2001 Federal fiscal year. The Dredged Material Management Plan (DMMP) calls for in-water disposal at the flow lane disposal site at Morgan Bar. The Corps will need to determine the feasibility of moving forward with this plan, or develop other long-term alternatives.

Vancouver Turning Basin may require maintenance dredging by the dredge *Oregon* in the fall of 1999. The existing disposal site on West Hayden Island may not be available due to permitting issues while the site remains in Multnomah County. An alternative site at the Port of Vancouver has been permitted to accept fill from the channel and will be available as an alternate disposal area.

Re-handle Sites for Dredged Material-Pilot Project

The Port is developing two designs for dredged material re-handling facilities to be used for dewatering dredged material and re-handling the material for transport to upland disposal or beneficial use. Two sites are under final consideration. The Suttle Road site in the Terminal 6 vicinity will be used for

clean/ uncontaminated dredged material. The dredged material will be processed for beneficial re-use, if possible.

A second re-handle site is contemplated at Berth 408, Terminal 4. This site will be constructed to handle contaminated sediments. Contaminated sediments would be removed and used as daily cover at a licensed landfill. Either site is scheduled to be operational in the 2000/01 season.

More information on this project can be viewed at the following Port location: \\Popfs\marplan-pub\Dredging & Sediments\dredge rehandle.ppt

Alternative Disposal Options for Contaminated Sediments

Terminal 4 slips may provide a future opportunity as a near-shore confined aquatic disposal (CAD) site. The Marine Department recently wrote a white paper on this subject. To view a draft of the white paper: \\Popfs\marplan-pub\Dredging & Sediments\Terminal 4 Fill Options- Draft.doc

Dredging History, 1979-1999

Port Marine and Engineering Department staff recently compiled a 20-year history of dredging projects on the Willamette River conducted by the Port. The table distinguishes between borrow dredging, maintenance dredging, and construction projects.

To view the dredging history: \\Popfs\marplan-pub\Dredging & Sediments\Port Dredging 1979-1999.xls

Schedule

The schedule for 2000/01 maintenance dredging activities will be developed following review of the reconnaissance survey results in the summer of 2000.